

Application No.: 09/874,510

Docket No.: JCLA9803

**REMARKS****Present Status of the Application**

The Final Office Action dated October 12, 2005 rejected claims 2-18, 29, 34, 38-41, 59-62 under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In addition, the Office Action rejected claims 59-62 under 35 U.S.C. 102(a) as being clearly anticipated by Kwang-Cheng Chen et al. ("Selective Hopping for Hit Avoidance," IEEE P802.15 Working Group Contribution, IEEE 802.15-01/057r2, March 10, 2001 as cited in the IDS filed June 5, 2001., hereinafter "Chen IEEE slides")

Applicants have amended claims 2, 6, 17, 18, 27, 30, 31, 34, 36, 37, 38, 54, and 59 for overcoming the aforementioned claim rejections and/or objections. In addition, Applicants respectfully traverse the rejections addressed to claims 2-18, 29, 38-41, 47-49, and 59-62 for at least the reasons set forth below.

**Discussion of the claim rejection under 35 USC 112**

*The Office Action rejected claims 2-18, 29, 34, 38-41, 59-62 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.*

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In response to Item 12 in the Office Action, the following traversing are presented: {To firm: please help double check the response to item 12 based on the revised claim 2}

In Paragraphs [0056] and [0066] of {To firm: please do the wording if necessary} the early publication US20030058923 of the present invention, it is implicit that interference event, interference-free event, and unknown event ALL 3 TOGETHER make up the number of selected received signal packets. In other words, the number of selected received signal packets = interference event + interference-free event + unknown event.

Therefore, the number of selected received signal packets - unknown event = interference event + interference-free event

As a result, the “the number of selected received signal packets subtracting the number of unknown events” in Claim 2 is EQUAL to “the sum of the number of interference events and the number of interference-free events”. Therefore, “the number of the measured interference divided by the number of selected received signal packets subtracting the number of unknown events” in Claim 2 is also EQUIVALENT to “the number of interference events divided by the sum of the number of interference events and the number of interference-free events”

Furthermore in Paragraph [0066], the interference collision ratio for each channel is clearly defined as “.... the ratio of the number of interference events to the sum of the number of interference events and the number of interference-free events.”

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Since “the number of the interference events (if expressed as A) divided by the sum of the number of interference events (A) and the number of interference-free events (if expressed as C)” would clearly have meant  $(A / (A+C))$  based upon the typical definition for the precedence of “sum of ....”. As a result, the equivalent form to “the sum of the number of interference events and the number of interference-free events” is “the number of selected received signal packets (if expressed as D) subtracting the number of unknown events (if expressed as E)”. Thus,  $(A/(A+C)) = (A/(D-E))$ . As a result, “the number of selected received signal packets subtracting the number of unknown events” (also known as  $A/(D-E)$ ) in Claim 2 is clearly defined, therefore, the rejection under 35 USC 112, second paragraph should be withdrawn. In addition, dependent claims 3-18 should also be allowed pending the allowance of claim 2.

In response to Item 13 in the Office Action, the acronym MAU is clearly defined in Paragraph [0019] of the present invention: “Minimal allocation unit (MAU) is defined according to the present invention as a set of signals which have the same importance (i.e., priority) to the receiving end.” And as found in MPEP 2173.02: “Definiteness of claim language must be analyzed, **not in a vacuum, but in light of: (A) The content of the particular application disclosure....**” Therefore, the claims have fully defined MAU in light of the content of the **particular application disclosure** in Paragraph [0019] in the present invention.

In response to Item 14 in the Office Action, “the time slot” is amended to “a time slot” and “said good channels” is amended to “a plurality of good channels” in Claim 34 to overcome the rejections due to antecedence.

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In response to Item 15, the limitation “dividing means .... designating a predetermined number” clearly describes an element “a predetermined number” designated by the dividing means. Whereas, the limitation “determining means .... for determining the number of MAUs for each of said partitions” includes a feature “for determining the number of MAUs for each of said partitions”. In the above feature “for determining the number of MAUs for each of said partitions”, the portion “determining the number” is a step which is to be performed and is NOT an element as is “a predetermined number” or “the determined number” in “the determined number by the determining means” as stated by the Examiner in the Office Action on page 7. Furthermore, it is supported in Paragraph [0028]: “Step 1: Calculate the total number of MAUs of this (j<sup>th</sup>) partition.”

In response to Item 16 in the Office Action, Paragraph [0053] of the present invention describes the system architecture of the present invention in which “A partition sequence change processor 319 provides the process for changing the partition sequence and has an output connected to an original/mapped sequence selector 316.” And also describes that “A partition sequence generator 317 ..... and serves as a generator of a partition sequence.” Therefore, it is clearly evident that the “partition sequence” generated by the partition sequence generator is the same as the “partition sequence” changed by the partition sequence change processor based upon the interacting relationship described above in Paragraph [0053]. As a result, claims 59-62 should be allowable.

In response to Items 17 & 18 in the Office Action, claims 47-49 are dependent claims

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which are dependent upon claim 42. Furthermore, claim 42 is further dependent upon claim 37. As stated in MPEP 608.01(n) IV: "A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim." Therefore, claims 47-49 already include the subject matter described in the specification from claim 37. As a result, claims 47-49 should be allowable.

**Discussion of the claim rejection under 35 USC 102**

*The Office Action rejected claims 59-62 under 35 U.S.C. 102(a) as being clearly anticipated by Kwang-Cheng Chen et al. ("Selective Hopping for Hit Avoidance," IEEE P802.15 Working Group Contribution, IEEE 802.15-01/057r2, March 10, 2001 as cited in the IDS filed June 5, 2001, "Chen IEEE slides" hereinafter)*

Applicants respectfully traverse the rejection of claim 59 under 35 U.S.C. 102(a).

In response to Item 20 in the Office Action, the following elements in FIG. 3 of the present invention are NOT found in circuit slide 14 of Chen IEEE slides: channel partitioner 318, the coupling relationship between 318 and 315, 303, 317, the coupling relationship between 303 and 317, and the coupling relationship between traffic requirement input and 317. According to MPEP 2131, anticipation under 102 requires that "The elements must be arranged as required by the claim." Therefore, the missing coupling relationships above violated the above anticipation requirement of "elements must be arranged as required by the claim."

As a result, it is no longer inherent / implicit that the features "outputting a continuous

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sinusoidal signal” and “a mixed signal is converted to a lower and fixed intermediate frequency signal” are present based upon the fact that NOT all of the above elements and arrangement of elements in FIG. 3 are found in circuit slide 14 of Chen IEEE slides as well as the following traversing. Most importantly, the question is NOT whether a frequency synthesizer CAN convert a mixed signal to a lower and fixed intermediate frequency signal in order for anticipation to exist. Surely, a frequency synthesizer IS CAPABLE OF indeed converting a mixed signal to large number of different types of signals. BUT, the question is that given ONLY the Chen IEEE slides WITHOUT any teachings of the present invention, would a person skilled in the art at the time the invention was made found it to be implicitly or inherently evident to “outputting a continuous sinusoidal signal” and to have “a mixed signal is converted to a lower and fixed intermediate frequency signal” when faced with the objective of the present invention of PROVIDING a selective hopping method for hit avoidance effectively using available channels in the communication system ? Since no suggestion or motivation in the Chen IEEE slides as well as in the state of the art at the time the invention was made is found for “outputting a continuous sinusoidal signal” and “a mixed signal is converted to a lower and fixed intermediate frequency signal” to give a selective hopping method for hit avoidance effectively using the available channels in the communication system, therefore, the Chen IEEE slides DOES NOT anticipate claim 59. Furthermore, “outputting a continuous sinusoidal signal” and “a mixed signal is converted to a lower and fixed intermediate frequency signal” are specific functions of which an apparatus, frequency synthesizer, provides or performs, and therefore are not suitably

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considered as inherent characteristics or properties OF the apparatus.

As a result, claim 59 and subsequently the dependent claims 60-62 which are dependent upon claim 59 patentably distinguish over Chen IEEE slides. And claims 59-62 should be allowed.

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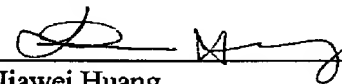
**CONCLUSION**

For at least the foregoing reasons, it is believed that all the pending claims 1-63 of the present application patently define over the prior art and are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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